



## DASAF's CORNER

*from the Director of Army Safety*



### Readiness and safety are inseparable

**A**s we enter this Thanksgiving season, reflecting upon recent events gives us an even greater appreciation for the fact that we have the opportunity to live in and defend the greatest country in the world. In the midst of our pain and anger, let us not forget the families and friends of our fallen comrades. Let us also pause to give special thanks for those who so willingly serve our nation with a level of devoted service unparalleled in any other profession. We truly are a magnificent Army.

For more than 220 years, the finest men and women in the world have faithfully fulfilled the Army's non-negotiable contract with the American people: to fight and win our Nation's wars. Those of us who wear the uniform today will do so again. This time it will be in a war of a different kind, on a different front, facing an adversary whose acts of terrorism have left us bloodied in our own homeland—but with an unshakeable resolve that these despicable acts of war will not go unpunished. The United States Army is ready to do its part.

Now more than ever, it's imperative that leaders and soldiers alike fully understand that readiness and safety are inseparable. We must stay focused on the tasks at hand. We must continue to ensure that safety and risk management are completely integrated into every mission and operation we execute. History tells us that in every major conflict, with the exception of Korea, we lost more soldiers to accidents than to enemy action. We cannot allow that to happen this time. The loss of a single soldier in a preventable

accident represents a serious drain on our readiness.

The same 5-step risk management process that we adopted as our principal risk-reduction tool, and integrated into the Army in the 1990s, will continue to serve us well as we answer our Nation's call. We must diligently guard against reverting to a mindset of "this is war, and accidents are the cost of doing business." The risk management standard is also non-negotiable: an informed risk decision made at the appropriate level applies in combat as well. I challenge each of you to ensure that we continue to identify hazards to the fullest extent possible, that they are properly assessed, that risks in all missions are reduced to the lowest possible level, and that informed decisions are made at the appropriate level of command when accepting residual risks.

We are now engaged in what our Commander-In-Chief has declared the first war of the 21<sup>st</sup> century. Implicit within our warfighting mission is the requirement to do so with minimal losses. We're trained; we're ready. Let us now find the strength, discipline, wisdom, and skill to effectively use every available risk management technique and resource, to help us ensure the safety of all who are answering the call to avenge what many are labeling as the darkest day in American history.

BG James E. Simmons  
Director of Army Safety

# Safety Alert Notification: OH-58D

Accident analysis by the US Army Safety Center indicates a significant increase in OH-58D Kiowa Warrior Class A-C accidents, throughout the fleet, from FY 99 to present. Fortunately, none of these recent accidents have resulted in a fatality, but aircraft have been destroyed and personnel injured. For this FY alone, OH-58D Kiowa Warrior Class A accident rates are more than five times greater than for any other aircraft. This trend points to a combination of material and human factors. Accident/Incident Summaries from FY 01:

**An OH-58D(I) at 1300 feet MSL experienced an engine surge followed by an engine failure. Analysis indicated the fuel boost pump arm of the inlet valve stem was bent and the boost pump was missing an umbrella check valve. TM states that if the umbrella valve is not installed, the engine may flame out when fuel is below the top of the canister and the fuel boost pump becomes inoperative.**

**An OH-58D(I) experienced an uncommanded power loss at 150 feet AGL during a recon mission. Rotor and engine drooped and aircraft crashed into trees. Suspected ESC anomaly caused power loss/droop. The aircraft had a history of "unable to duplicate" engine anomalies.**

**As an MTP was returning from a test flight in an OH-58D(R), low rotor audio activated, and LOW ROTOR warning displayed on the MFD. Rotor RPM drooped to 94% NR. The engine recovered and the MTP landed safely. Determined that low rotor RPM resulted from the "already suspect HMU."**

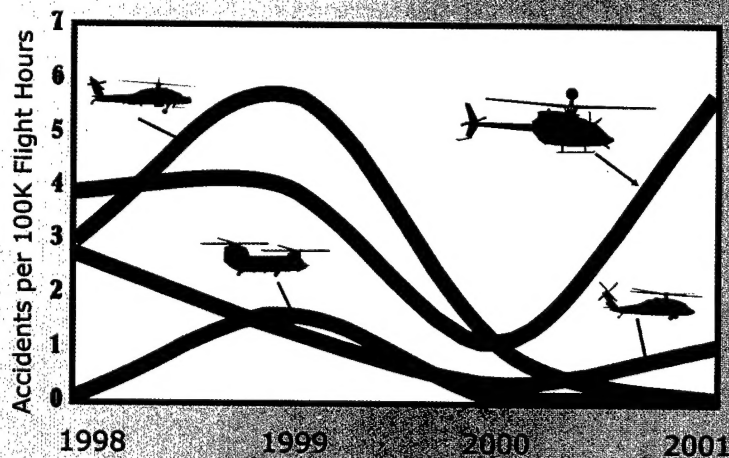
**An OH-58D(R) experienced "Engine-Out" cockpit indication, after which the aircraft descended to the ground. Post-crash fire destroyed the aircraft.**

**During an OH-58D(R) qualification training flight, during FADEC manual operations, the rated student pilot allowed the rotor RPM to decay below 95% and the aircraft began a rapid descent. The IP took the controls but was unable to arrest the descent prior to ground impact.**

In response to this trend, the leadership of the Army convened an Army Safety Action Team at Redstone Arsenal in September. An Action Team has been formed to conduct a detailed analysis of the causal factors and identify interim and long-term control measures to reverse the direction the OH-58D fleet has been headed. Until the Action Team can develop a long-term plan, it is essential that commanders take appropriate risk management steps based on the additional information provided.

Recommend that commanders review their safety, maintenance, and training programs in light of this information. Commanders must look closely at their risk management procedures based on these accidents, and adjust their risk management decisions. I further recommend that commanders limit FADEC analog manual throttle training to in-ground-effect (IGE) demonstrations over hard surfaces on

## FY01 Class A Accident Rates



improved airfields.

**Maintenance practices:** Accidents in the last three years indicate incomplete maintenance practices as a major contributing factor. These included “could not duplicate” write-ups and incomplete troubleshooting procedures. Commanders should ensure that by-the-book troubleshooting and maintenance procedures are conducted and supervised by the chain of command. Special emphasis should be placed on identification and maintenance management of individual aircraft with a history of unexplained and “unable to duplicate” engine anomalies.

Flight profiles and envelopes—a significant number of accidents during the last three years have involved individual training flights with an IP on board. The specific maneuvers involved include simulated engine failures and analog/FADEC manual throttle operations. Tactical flight profiles where power and control margins are minimal (NOE/OGE/Gunnery), and profiles that require flight close to obstacles are major contributors to the human factors portion of these accidents. Missions that include individual qualification/evaluation that require simulated engine failure or manual throttle operations should be considered high risk. Additionally, tactical flight requiring high power settings and

limited control margins from obstacles should be avoided as much as possible.

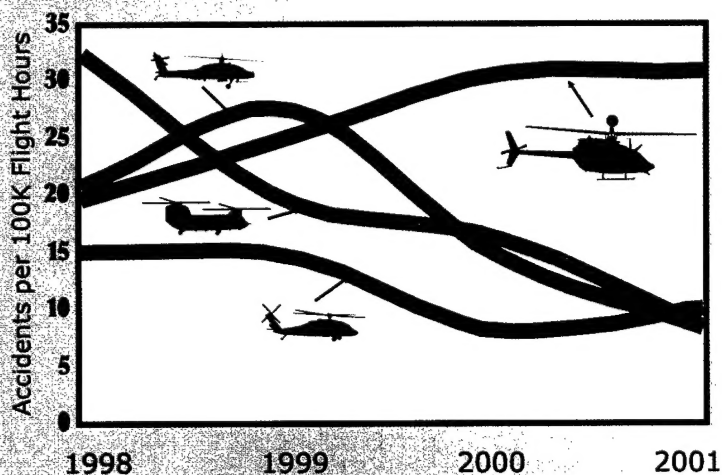
The capabilities of the OH-58D Kiowa Warrior and its mission place the aircraft and crew in a position that creates very limited margins for error. Commanders must use every tool available to mitigate risk. Commanders must ensure that the aircraft and crew are capable of performing the mission prior to accepting it. Higher-level commanders must be willing to support those decisions.

The Action Team will provide an initial report to the Army Safety Action Team. As the long-term plan is developed and approved, it will be communicated to the field as soon as practicable.

JAMES E. SIMMONS  
Brigadier General, USA  
Director of Army Safety



## FY01 Class A-C Accident Rates

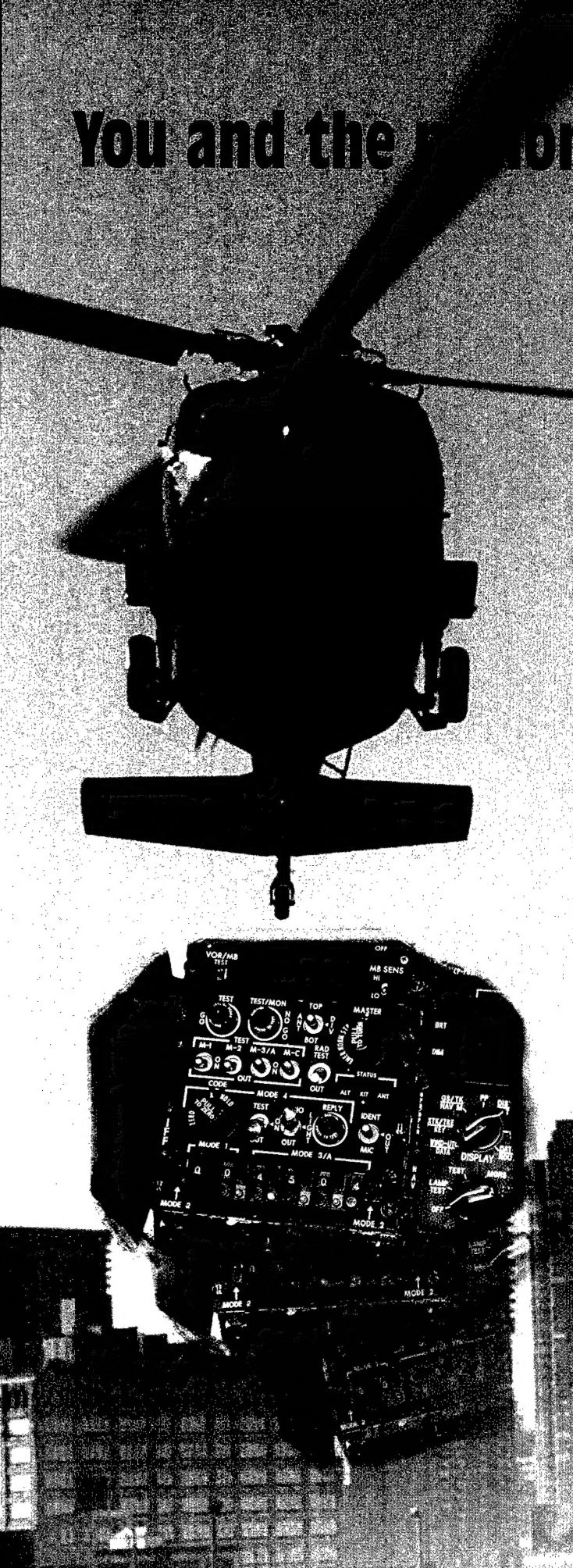


## Kiowa Warrior Action Team

The Kiowa Warrior Action Team, made up of representatives from Aviation and Missile Command (AMCOM) (Engineering and Safety), the Scout/Attack Executive Office, US Army Aviation Center (USAAVNC) (Aviation Branch Safety Office; Directorate of Evaluation & Standardization) and US Army Safety Center, convened at Redstone Arsenal in late September. Their objective was to identify interim solutions to attack the rising OH-58D accident rate. With interim solutions identified, the group met again at Fort Rucker as an Army Safety Investment Strategy Team (ASIST) Analysis Group to conduct an in-depth analysis and identify long-term solutions. Participants included the people involved in the Redstone meeting and representatives from USAAVNC {Combat Developments; Training, Doctrine & Simulation; Aviation Training Brigade; Directorate of Combat Developments; Directorate of Plans, Training, Mobilization & Security}, Army Aeromedical Research Lab; Army Research Institute and the Army Research Lab. Results of this in-depth analysis will be published in a future issue of *Flightfax*.




# You and the national airspace system



**U**S Army aircraft, operating under instrument flight rules (IFR) or visual flight rules (VFR), are authorized for flight in the national airspace system (NAS) provided they have filed a flight plan and received a discrete beacon code assignment by air traffic control (ATC). Flight without an appropriate discrete beacon assignment is not authorized. DoD Flight information publication (FLIP) flight plan filing procedures are in effect. It is essential that national flight data center (FDC) notices to airmen (NOTAM) be thoroughly reviewed prior to flight.

Army aircraft must have an operational transponder capable of transmitting and responding to the air traffic control radar beacon system (ATCRBS). Until further notice, aircraft without an operative transponder are not mission capable and are not—repeat not—authorized flight. This does not change the reporting criteria of AR 700-138.

Recent events have shown that immediate and positive identification of Army aircraft is essential (100% accountability) to our national security and critical for Force Protection. MACOM commanders, CNGB, and OCAR must ensure that adequate C2 procedures are in place to ensure the Army has that capability, and to quickly reinstate national control protocols if necessary.

VFR flight near (5 sm radius) critical infrastructure facilities such as chemical storage sites, nuclear facilities, dams, and water supply systems etc. is not permitted. Commander's guidance should be provided as part of the pre-briefing and risk assessment determination. MACOM and subordinate commanders have the prerogative to put more restrictive measures in place to satisfy their unique operating or geographical requirements. 

—HQDA POC is Mr. Yates, DSN 656-4867, 703) 806-4867, email: [yates@hqda-aoc.Army.pentagon.mil](mailto:yates@hqda-aoc.Army.pentagon.mil) or [Roger\\_w\\_yates@belvoir.Army.mil](mailto:Roger_w_yates@belvoir.Army.mil).





# Investigator's Forum

A recent ground accident involving a MH-6M (MELB) highlights the fact that aircraft equipped with a Full Authority Digital Electronic Control (FADEC) can be inadvertently started. In this case, a mechanic may have accidentally pressed the start switch while checking throttle travel, and the engine started automatically with the auto start feature of the FADEC. The aircraft spun on the ground during start up and struck a civilian aircraft and a tool stand, damaging the wing of the civilian aircraft and the tail rotor and tail boom on the MH-6M.

In another incident, an OH-58D with the blades folded, was inadvertently started in a ship's hangar when a crew chief accidentally pressed the start switch, with external power applied to the aircraft and the throttle open. Needless to say, both these accidents were unexpected by the maintenance personnel and could have potentially caused severe injury to nearby personnel.

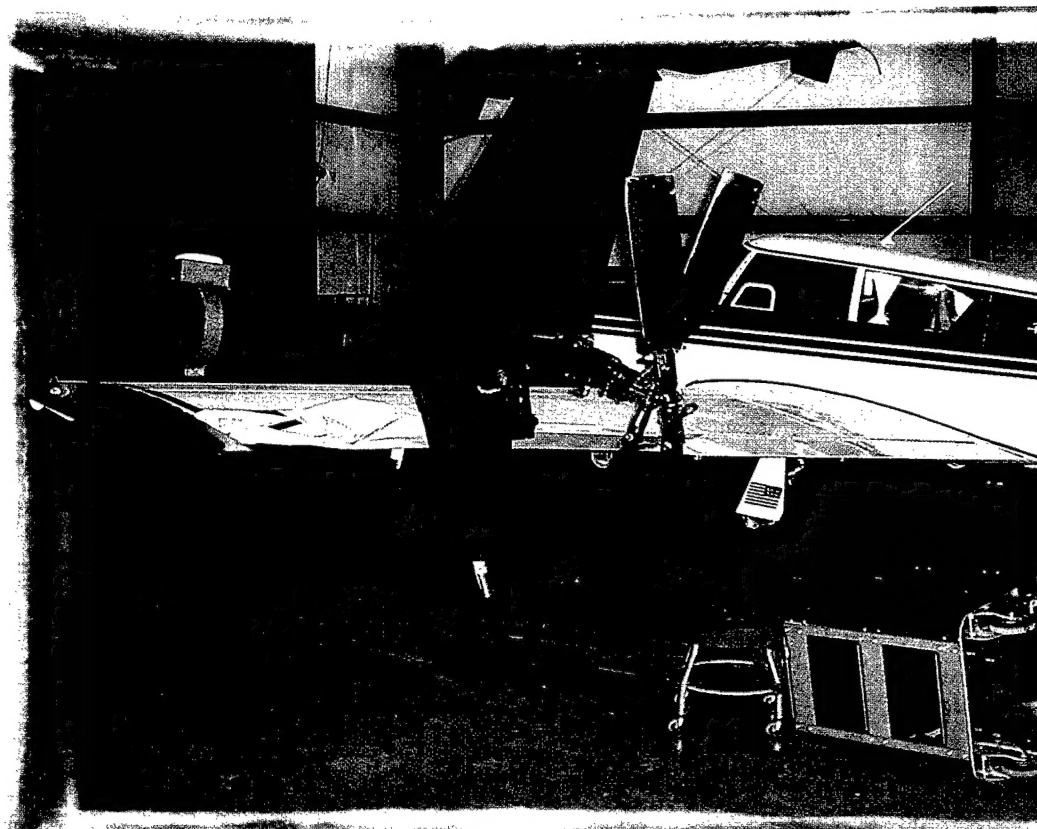
Both the MH-6M and the OH-58D(R) are equipped with the FADEC systems. With the ignition switch on, circuit breakers in, and the FADEC in the AUTO mode, the FADEC auto-start start mode automatically initiates an engine start sequence when the throttle is in the idle detent position and the start switch is pressed for 2 seconds.

Both of these accidents

could have been prevented if proper procedures were followed. Aircraft keys should only be signed out to qualified personnel, and keys should be inserted and turned on only if engine start is required. When stored in the hangar, or when maintenance is being performed on the aircraft, the STARTER, IGNITER and FADEC circuit breakers should be in the "OFF" position and battery disconnected.

Make sure your maintenance SOP outlines these procedures and ensure maintenance personnel know how to perform an emergency engine shut down. Use extreme caution when performing "power-on" troubleshooting procedures with a FADEC equipped aircraft! ✈

—Major Mike Cumbie, Chief, Scout/Attack Branch, USASC, DSN 558-3754  
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# More or Less on Radar

**W**hen an aviation accident occurs, especially one resulting in fatalities, we need to understand and question all available investigative facts. A recent weather related, fixed wing accident resulted in questions about the airborne radar system being unreliable, as either underpowered or too “weak”. Can onboard radar display weather less severe than the storm’s actual intensity? How does this happen? How can a pilot determine the strength of the radar system?

Here is how this happens. First, the heart of airborne weather radar is the EMT (Electro Magnatron Tube). The more the EMT is used, the weaker it becomes over time. This cannot be changed. However, pilots can reduce unnecessary EMT degradation. Modern radar systems do not require a long warm-up (stand-by) time, as did the pre-1980’s units. The stand-by position turns the EMT ON, without allowing it to transmit. If radar is not going to be used, or is no longer deemed necessary, turn the unit OFF! Leaving the radar in stand-by is like leaving the lights on with no one home!

Follow the manufacturer’s recommended operating procedures.

Pilots can determine the strength of the airborne weather radar unit. Here’s a quick review of these procedures:

1. In flight, determine your altitude AGL to the nearest 1000 feet.

2. Find the “square root” of the altitude (AGL) e.g. FL240 – 1000’ = 23000 feet = 151.66 or rounded, 152 nautical miles. (Good math skills or calculator needed!)

3. Adjust the radar range ring to the next larger distance (i.e. 300/320 NM in this example).

4. Adjust the antenna tilt “down” to display the maximum range of ground clutter (GC).

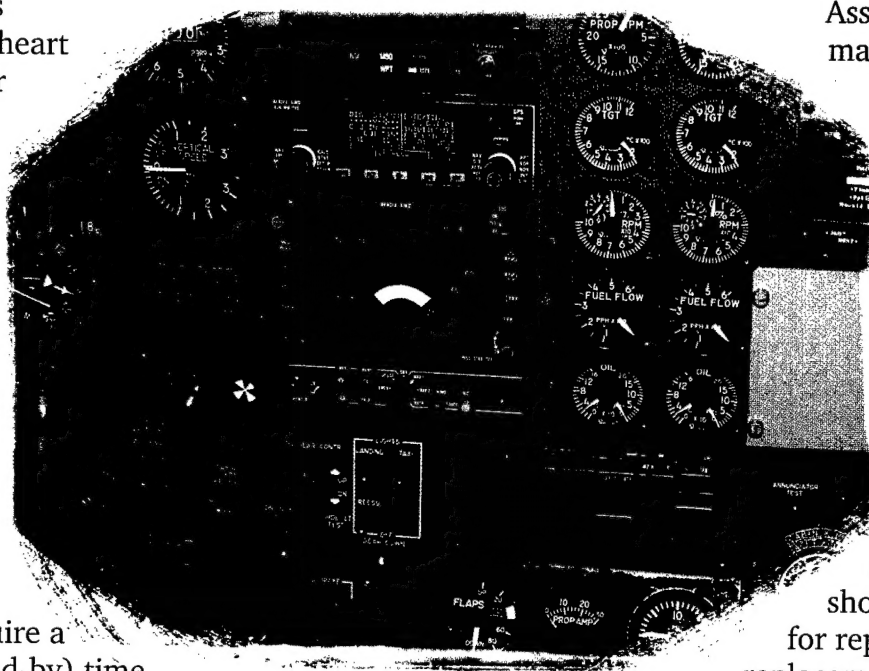
5. GC should be painted or displayed slightly over the 150 NM ring or range for 100% EMT strength.

Assume the maximum ground clutter range was only 100 NM. Divide the 100 by 152 and the result is 66% EMT strength. Clearly, this radar unit’s signal strength is unreliable and avionics should evaluate it for repair or replacement.

Important point—Just passing the recommended radar *ground* tests is simply not enough. Use the above *airborne* test to assure the strength and reliability of the weather being displayed.

Airborne Weather Radar is an active avoidance tool, but it is NOT a stand-alone system! Visual cues, storm scope, PIREPS, and updated ground-based reports are also valuable and should be incorporated for the in-flight decision-making process. ➔

—CW4 Paul Herrick, Flight Standards B Company 6th BN 52D Av Regt, Ft. McCoy WI  
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# Pilot weather reporting—a lost art?

Following a recent accident, some of us are asking ourselves what we can do better in the future. We are still grieving the loss of two safety officers, two crew chiefs, a liaison officer and his assistant. My primary concern is to focus on what we can do better in the future to prevent similar mishaps.

First, we asked ourselves if there was a way to move the weather forecasting component out to the terrain flight training area (TFTA) in order to provide a better decision-making tool. After looking at the problem, the prospect of putting a manned weather observatory and other equipment in the TFTA is neither cost-effective nor geographically feasible, due to the poor trafficability of the road system in this region.

I have come to the conclusion that the answer to the problem requires the use of an age-old technique of helping your fellow aviator by submitting a pilot weather report (PIREP) to the forecasting agency. I realized that we overhear fixed-wing pilots giving PIREPs to controlling agencies all the time, yet I never hear rotary wing pilots following suit. This is especially true during tactical training exercises. I will point out to you that PIREPs are not regulatory or required, except in FAA (Federal Aviation Administration) airspace when ceilings and visibility are less than 5000 feet and 5 statute miles respectively. I refer you to FAR/ AIM (Federal Aviation Regulations/Airman's Information Manual). PIREPs are, however, an invaluable source of information for the weather forecaster, who in turn properly encodes the information pilots provide and includes it in his next brief. In many instances, your PIREP will enhance the forecaster's prediction, thus giving aircraft commanders and mission planners a far better planning tool than



the forecaster's calculations alone.

I talked with the senior forecaster at our Air Force Weather Detachment to get some raw numbers on how many PIREPs his station receives on a daily basis. The answer was "Zero". He went on to explain that his answer would be the same if I rephrased the question, substituting the word "daily" with "weekly", "monthly", or "annual" basis. In short, he told me that he never receives PIREPs.

This is something we can all do better. We pride ourselves as professional aviators, and as true professionals we should be concerned and helpful towards others in our profession. It only takes a moment to tune up your Metro frequency and call in a PIREP. There is no specific format to adhere to when submitting a PIREP. In most cases your weather forecaster/briefer will be appreciative.

I want to encourage all safety professionals out in the field to call your weather people and ask them what kind of interaction they experience with PIREPs. I hope the response you get is better than the one I got. I also want to encourage all of you with wings on your chest to help that guy who may be wrestling with a tough weather call before a dark and rainy mission. ✈

—CW2 Chris Bryant, ASO, WAAF, HI, DSN 456-9880, Daniel.Bryant@us.army.mil



# A fuel cell is a confined space

**L**ate one Friday afternoon, an individual crawled inside the aft fuel cell of an AH-64 aircraft to perform a Modification Work Order on an internal valve. His body was found the following Sunday afternoon. The individual was alone at the time, but decided to do this one check before departing for home.

Soldiers and other workers who enter aircraft fuel cells or fuel tanks to perform maintenance work are entering permit-required confined spaces. However, in many cases the required safety procedures are not followed, and no permit-required confined space entry programs exist. Also, current aviation maintenance technical manuals (TMs) may not cover all occupational health and safety requirements regarding fuel cell entry and work.

Permit-required confined space work is extremely dangerous. Fortunately, the number of confined space accidents is small in comparison to other occupational accidents. However, when they do occur, they more than likely result in death, not injury. And they usually result in more than one fatality because of unsuccessful rescue attempts.

Aircraft fuel cells and fuel

tanks clearly meet the characteristics outlined in 29 CFR 1910.146, Permit-Required Confined Space Standard, classifying them as permit-required confined spaces. Fuel cells contain atmospheres that are potentially both toxic and explosive. Additionally, purging fuel cells to remove toxic vapors may create another hazardous atmosphere, one that is oxygen deficient. Gases such as carbon dioxide and nitrogen, used to purge toxic vapors, can displace oxygen in the fuel cell creating an oxygen deficient environment. The safe oxygen level for entry in a confined space is 19.5% to 23.5%. Care must be taken to avoid the creation of explosion hazards, as well as to prevent the inhalation and absorption of toxic chemicals. Toxic chemicals of most concern regarding fuel cells are kerosene, the other constituents of JP8, and solvents.

Therefore, it is critical that a permit-required confined space entry program be in place and enforced when performing work in fuel cells. A unit cannot maintain a permit-required confined space entry program by itself. Entering a fuel cell requires the collective efforts and expertise of a number of individuals including an


industrial hygienist (IH), safety professionals, medical personnel, and fire department personnel. Requirements for personal protective equipment (PPE), including respirators, gloves, clothing, footwear, head gear, goggles, and hearing protection must be established. This should be determined by the industrial hygienist and/or safety professional. Merely having an individual stand by as a safety monitor during fuel cell entry, does not constitute a permit-required confined space entry program. Authorized entrants, attendants, entry supervisors, rescue/emergency personnel, industrial hygienists, safety professionals, and fire department personnel must be trained in the requirements of the permit-required confined space standard. Training is a critical part of a permit-required confined space entry program. Training must be provided before permit-required confined space entry work, when there is a change in duties, when an operation changes, and when the employer determines that some type of inadequacy exists and additional training is warranted. Additionally, simulated rescue operations must be performed at least annually.

Rescue from any permit-required confined space is very difficult, especially in the case of fuel cells such as the ones on Black Hawks and Apaches. These fuel cells are quite small and have a small entry point, making it impossible for rescue personnel to enter. The only two options for rescue are to cut the fuel cell open, or have some type of retrieval system. The Permit-Required Confined Space Standard, 29 CFR 1910.146, requires that a retrieval system be used in cases of non-entry rescue,

unless the retrieval system itself would increase risk or would not contribute to the rescue of the entrant.

Other issues such as rescue and emergency equipment, non-sparking tools and equipment, and control of hazardous energy must be considered to ensure safe work in a permit-required confined space.

Despite the hazardous characteristics of permit-required confined spaces, work within them can be safely performed if all the

requirements of 29 CFR 1910.146 are incorporated into a sound permit-required confined space entry program. Before you begin any type of maintenance work regarding fuel cell entry, ensure your unit has a permit-required confined space entry program. If not, do not enter the fuel cell. Contact your safety officer/manager or installation industrial hygienist for assistance. 

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The National Institute of Occupational Health and Safety has published a summary of case reports regarding confined space accidents that can be found at the following web site: <http://www.cdc.gov/niosh/94-103.html>. In order for a space to be a confined space it must be large enough so that a worker can bodily enter it and perform work, have limited or restricted means for entry or exit, and is not designed for continuous employee occupancy. Note that the space must have all three characteristics for it to be considered a confined space. Note also, that by definition a confined space has no inherent health hazards. However, if a confined space contains or has the potential to contain a hazardous atmosphere; contains a material that has the potential for engulfing an entrant; has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls, or by a sloping floor that tapers to a smaller cross section; or any other recognized serious health or safety hazard, then the confined space becomes a permit-required confined space. At this point all the requirements of 29 CFR 1910.146, Permit-Required Confined Space Standard ([http://www.osha-slc.gov/OshStd\\_data/1910\\_0146.html](http://www.osha-slc.gov/OshStd_data/1910_0146.html)) must be met in order for a Soldier or other worker to enter the fuel cell or tank. (Remember, per AR 385-10, paragraph 3-1a. federal safety standards are adopted as US Army safety standards.) A confined space automatically becomes a permit-required confined space when it possesses just one of these characteristics. See the March 2001 issue of Countermeasure (<http://safety.army.mil/home.html>) for more information regarding the elements of a permit-required confined space entry program.

# WANTED

UH-60 pilots interested in participating in a study of laser vision surgery for rated Army Aviators. Please contact the USAARL Refractive Surgery Team at 334-255-6988, or by email at [jennifer.franks@se.amedd.army.mil](mailto:jennifer.franks@se.amedd.army.mil) for more information.



## Laser Eye Surgery—Can I have it? —Will it work for Army Aviation?

**T**he Army aviation community is considering refractive eye surgery as a potential alternative to glasses or contact lenses for soldiers who need correction to see well. Over the past few years, the Army has allowed individuals to enter the service if they have had photorefractive keratectomy (PRK) or laser in-situ keratomileusis (LASIK), although a few specialized career fields such as aviation are still restricting these applicants.

The US Army Aeromedical Research Laboratory (USAARL), Fort Rucker, Alabama, has initiated a study to evaluate laser eye surgery (refractive surgery) to determine whether it is a procedure that is compatible with the Army aviation environment. Refractive surgery involves procedures that modify the power of the eye in order to reduce dependence on glasses or contact lenses. There are numerous procedures available at present; however, only PRK and LASIK are being considered for the Army study. Procedures such as radial keratotomy (RK) or other incisional or implant surgeries are not

being included in the study at this time. The study will look at applicants to the Army's rotary-wing flight program, and will NOT include currently rated aviators or other classes of flying personnel. Current AR 40-501 standards are *not* being modified.

Both the Air Force and the Navy are evaluating refractive surgery for their aviation environments. Currently, PRK is the only procedure allowed for USAF aviators. LASIK

and RK are not authorized. USAF individuals do not need to be part of a study to have the procedure. In the Navy, pilots may have PRK but have to be part of a study. The Navy is evaluating approximately 250 pilots and 250 Naval flight officers (flying officers who are not pilots) who have had PRK, and will follow

them in the training pipeline.

Individuals who have had PRK or LASIK and are interested in participating in the Army study should contact the Refractive Surgery Research Team at USAARL to initiate the application process. The Army study will include 100 applicants each who have had PRK or LASIK.

**Refractive surgery involves procedures that modify the power of the eye in order to reduce dependence on glasses or contact lenses.**




Enrollment is anticipated to take about two years, and it is estimated that the study will be completed in three years. The application packet can be found by going to the USAARL website **[www.usaarl.army.mil](http://www.usaarl.army.mil)** or to the US Army Aeromedical Activity website **[www.rucker.amedd.army.mil/dept/aama](http://www.rucker.amedd.army.mil/dept/aama)**. Applications will be for consideration of an Exception to Policy for Refractive Surgery. The exception to policy is not a guarantee for entry into flight school, since there are no additional slots set aside for study participants. Flight school slots will still be competitive.

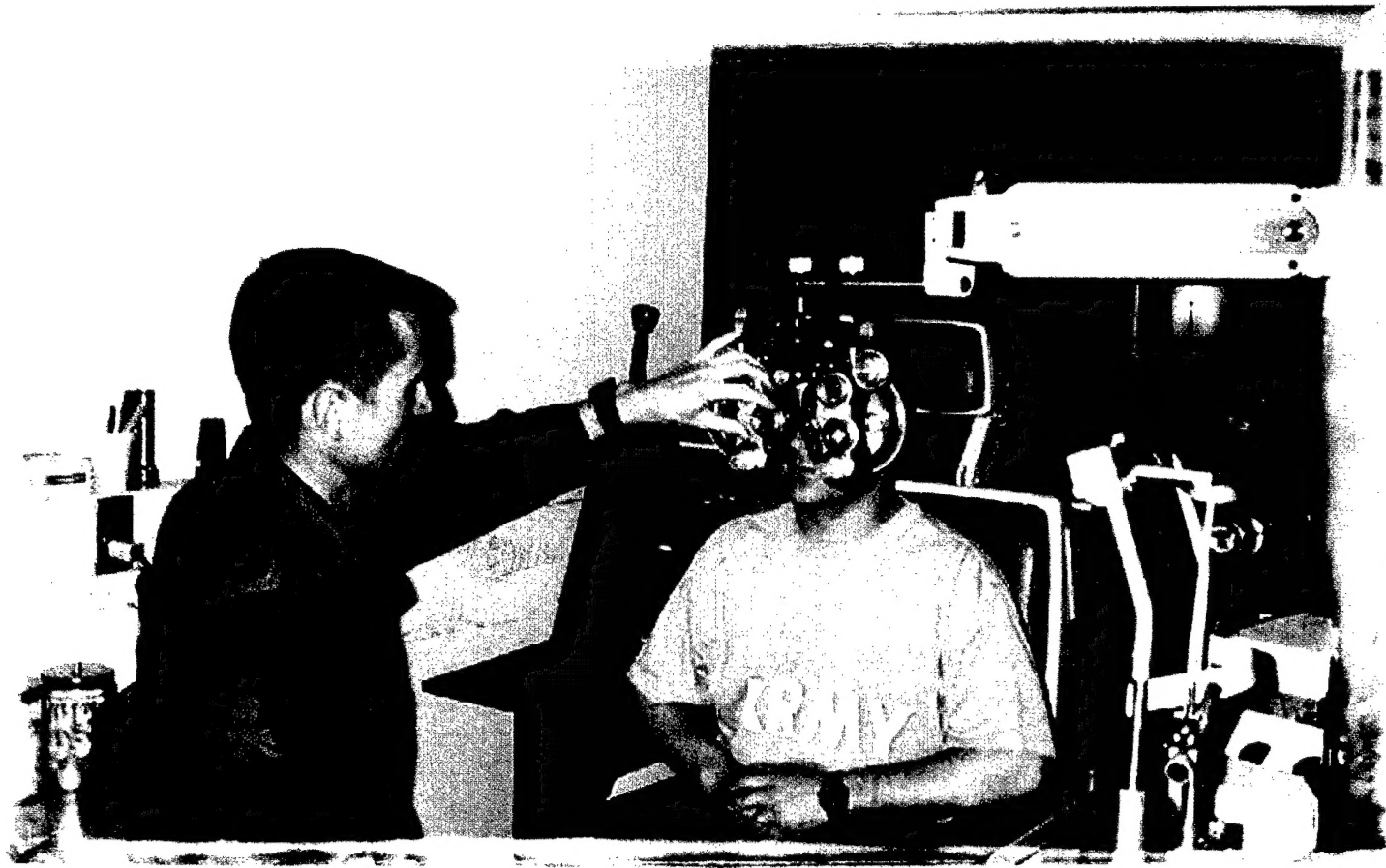
Those individuals who have not had PRK or LASIK surgery, but plan to in the future, may be considered for the study and should also contact USAARL's Refractive Surgery Study Team. However, refractive surgery should not be done for the sole purpose of getting into flight school. The decision has to be made based on a desire to reduce or eliminate a need for glasses or contacts, and should be made

only after fully exploring the consequences of the procedure. A corneal surgeon (or two) should be consulted, and it is also suggested that the **[www.surgicaleyes.com](http://www.surgicaleyes.com)** website be reviewed regarding reports of poor outcomes. In a proposed addition to the current study, the Army will provide the surgery to qualified applicants at Walter Reed Refractive Surgery Center.

There are a few Army medical centers that have the mission to provide refractive surgery to specific communities under the Warfighter Refractive Eye Surgery Program (WRESP). Refractive surgery is not a Tri-Care benefit; therefore, individuals will have to determine their eligibility at their supporting medical center.

The USAARL Refractive Surgery Study Team can be reached at 255-6868 or 255-6876. 

—Dr. Corina van de Pol, USAARL, DSN 558-6876, (334) 255-6876,  
[corina.vandepol@se.amedd.army.mil](mailto:corina.vandepol@se.amedd.army.mil)



# Program Manager for Aircrew Integrated Systems Provides Aviation Life Support Equipment Computer Based Training

**T**he Army's Aircrew Integrated Helmet System HGU-56/P has replaced the SPH-4 and SPH-4B helmet as the Army standard flight helmet. The HGU-56/P consists of a basic helmet, liner, earcups, dual visors, chin and nape strap, boom and microphone with speakers.

The Program Manager for Aircrew Integrated Systems located at Redstone Arsenal, Alabama, has contracted with Sigmatech, Inc., a Huntsville, Alabama training development firm, to produce Aviation Life Support Equipment (ALSE) computer-based training that will supplement the ALSE school curriculum taught at the Aviation Center and School, Ft Rucker, AL. This computer-based training will provide continuation training for ALSE technicians and qualified personnel who hold an H2/Q2 Additional Skill Identifier (ASI).

Users who attended the 2001 ALSE user's conference had an opportunity to participate in a demonstration of this computer based training.


Highly interactive computer-based training is near completion for the new helmet system, operation and maintenance of the AN/PRC-112 Survival Radio, and assembly, fitting and sizing of the Communication Earplugs (CEP). The CD-ROM will cover ALSE I, which consists of maintaining the HGU-56/P helmet; fitting of the HGU-56/P helmet to the M45 CB Mask;

fitting and sizing of the Communication Ear Plugs; operations and maintenance of the survival radio, and the serviceability of the Aviation Battle Dress Uniform (ABDU).



The second CD-ROM will cover ALSE II topics, which include fitting /maintenance of the M45 protective chemical biological mask, training on the aircraft modular survival system (AMSS), and training on the high altitude oxygen system. Equipment users will be able to run the CD-ROM on their work or home computers and utilize the training as a refresher or as initial instruction.

The first series of ALSE computer-based Interactive Multimedia Instructional (IMI) CDs will be available to the field this year.

Development has begun for additional training in fitting of the M45 chemical and biological mask, procedures for ALSE in high altitudes, maintenance of survival kits and vests, understanding aircraft modular survival systems, and operation and maintenance of oxygen equipment. This training is due out to the field mid-year 2002. 

—John Jolly, PM-ACIS, Redstone Arsenal, AL, (256) 313-4262, john.jolly@ and Lois Adams, Sigmatech, Ladams@sigmatech.com

# ACCIDENT BRIEFS

Information based on preliminary reports of aircraft accidents

## AH-1



### Class C F model

■ Aircraft landed hard during emergency autorotation due to loss of engine power.

■ During out of ground effect (OGE) hover check, transmission was overtorqued. Transmission replaced.

## AH-64



### Class B A model

During contour flight in mountainous terrain, aircraft contacted triple strand of power lines. The aircraft's wire strike protection system severed two strands of wire. After contact one wire remained connected to the aircraft. Crew executed precautionary landing.

### Class C A model

■ Aircraft struck a large bird in flight resulting in unrepairable damage to one main rotor blade.

### Class E A model

■ Gun was not returned to fixed forward after simulated harmonization and gun contacted ground upon landing. Mud was discovered in the barrel on post flight. No damage to gun or aircraft.

■ During aircraft run-up prior to flight, SIP engaged all digital automatic stabilization equipment (DASE) channels. Aircraft immediately began to move within the roll axis. Aircraft power levers were brought to idle, and aircraft was shut down without further incident.

The DASE computer was replaced.

## C-12



### Class C T Model

■ Crew reported bright flash off left wing while in flight at 13,000 feet above ground level, but experienced no instrumentation abnormalities. Post flight inspection revealed apparent lightning damage to propeller blade of No. 1 engine and FM5-800 GPS antenna.

### Class E D model

■ Shortly after entering cruise flight, the pilot received a call from contract maintenance asking for the aircraft to return to base. Upon aircraft's landing, a mechanic boarded the aircraft and removed the floor panel access to the main wing spar area. Two large adjustable wrenches were removed from the interior of the access panel, the panel covers were replaced, and the aircraft was released for flight.

## CH-47



### Class C D model

■ Post-maintenance test flight inspection revealed aft main rotor blade, blade damper, and rotor head component damage. Droop stop was found to be missing.

### Class E D model

■ During hover, utility hydraulic caution illuminated simultaneously with loud bang from pump area.

Aircraft landed without further incident. Utility hydraulic pump was replaced.

## OH-58



### Class A D-R Model

■ Engine failed during OGE hover. Postcrash fire ensued and reportedly destroyed the aircraft. Both crewmembers egressed the aircraft with treatable/minor injuries.

### Class C D-I model

■ Aircraft experienced an uncommanded descent from a 30-foot hover. Descent could not be arrested prior to impacting the ground.

## TH-67



### Class D A model

■ During the student pilot's first unassisted VMC approach to the ground, the student froze on the flight controls at approximately 15 feet above ground level. The Instructor Pilot (IP) announced he had the flight controls 2 times, but was unable to raise the collective due the student pilot using it as leverage to push himself up in his seat as the ground approached. The aircraft contacted the ground hard and was shut down without further damage.

## UH-1



### Class E H model

■ During hover, aircraft's pedals had intermittent uncommanded force trim engagement. Aircraft was landed and shutdown with

out further incident. Replaced tail rotor system magnetic brake. Test flown and released for flight.

## UH-60



### Class C A model

During a training evaluation flight under NVGs at terrain flight altitude, crew allowed main rotor of aircraft to contact tree branch resulting in damage to three rotor blade tip caps.

### Class D L model

Bambi bucket (660 gallon water bucket) fell in drop area during water bucket training. The flight crew returned the aircraft to parking and performed normal shutdown. The bucket was damaged. No damage occurred to aircraft.

### Class E A model

During approach, aircraft's master fire light illuminated. Crew detected no smoke. Aircraft was landed and shutdown without further incident. Upper and lower fire detectors were replaced on No. 2 engine.

## Aviation Related

### Class C


During landing, UH-60L rotor wash blew two AH-64 main rotor blade boxes over, damaging the blades stored inside the boxes. Five UH-60s had previously landed without incident. The sixth aircraft's landing direction was changed. The altered approach path brought the UH-60 too close to the rotor blade boxes.



# NEWS & notes

## Desert Boots not permitted

The question has come up again about flying with desert boots. The short answer is "NO", it is not permitted—only all leather boots are acceptable. Just like the jungle boot (hot weather boot), the desert boots have nylon uppers that are a hazard in the event of fire. Even if you have managed to get your hands on some USAF series 790 desert boots, it does not matter that the US Air Force permits their flight crew to fly with them, they are not cleared for use by Army aircrews.

An all-leather desert boot is currently undergoing evaluation, but until it is accepted, protect the only feet you got issued and wear the proper footgear. 


—LTC Robert Noback, Flight Surgeon, US Army Safety Center, DSN 558-2763 (334) 255-2763, nobackr@safetycenter.army.mil

## NO cold storage for batteries

If spare batteries are taking up space in the refrigerator, here's the word from the folks at CECOM—don't bother keeping batteries cold. Room temperature is fine for storing batteries. There's

no need to take up refrigerator space in your Aviation Life Support Equipment (ALSE) shop, or any other refrigerated space, keeping them cold.



Moreover, keeping them in the freezer can actually shorten their life. Moisture is more likely to collect in the freeze-thaw process. Moisture is not a good thing in the life of a battery. So take them out of the fridge, and keep them out of the freezer, and they'll be more likely to deliver power when needed. 

—Ken Broeckel, US Army Communications Electronics command, Fort Monmouth, NJ, DSN 992-5431, Kenneth.broeckel@mail1.monmouth.army.mil


## TRAINING & RISK MANAGEMENT

### Aviation Safety Officer Refresher Course (ASORC)

Twice a year, the US Army Safety Center (USASC) offers follow-on training for Aviation Safety Officers in the form of the Aviation Safety Officer Refresher Course (ASORC). This is a one-week course offered in September and December of each year. The final course this year occurs 3-7 December 01. Based on input from currently serving ASOs in the field, the course has gradually been revamped to serve as an advanced course in safety program management.

The "Modern Safety Issues" portion of the ASORC lasts 3 days. The Texas A&M staff will tailor the content to the needs of the attending students by examining the student's prioritized

needs in updated information. Some examples include current OSHA standards; projected changes to OSHA standards; EPA standards and latest inspection feedback (lessons learned); confined spaces and permit required confined spaces; personal protective equipment (PPE) requirements; hearing protection standards; most recent government citations; federal facility compliance act; new hires; first aid issues; material handling issues, and renovation or construction issues.

Attendees must be graduates of the Aviation Safety Officer Course. You may register for a slot in the course through your S-3 training office. Please remember that class space is limited to 30 personnel, so register early! 

—Robert Dobarzynski, US Army Safety Center Training Directorate, DSN 558-9197 (334) 255-9197, dobarzyr@safetycenter.army.mil